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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,775	10/24/2001	Nikolai K. N. Leung	020003	7175
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QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER ZHONG, CHAD	
			ART UNIT 2152	PAPER NUMBER

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/032,775

Applicant(s)

LEUNG, NIKOLAI K. N.

Examiner

Chad Zhong

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/16/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-22 are presented for examination.
2. Applicant is required to update the status (pending, allowed, etc.) of all parent priority applications in the first line of the specification. The status of all citations of US filed applications in the specification should also be updated where appropriate.
3. The examiner will interpret *information content* as any of multimedia information comprising audio or video or combination of the two mediums. In addition, *Quality of Service* will be interpreted as providing a guarantee of bandwidth in the network for use by applications
4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.  
Specifically, references  
"TIA/EIA/IS-95-B Mobile Station-Base Station Compatibility Standard for Dual Mode Wideband Spread Spectrum Cellular System"  
"3<sup>rd</sup> Generation Partnership Project Nos. set of documents including Document Nos. 3G TS 25.211, 3G TS 25.212, 3G, TS 25.213, and 3G TS 25.214, 3G TS 25.302, referred to herein as the W-CDMA standard, the standard offered by a consortium named "3rd Generation Partnership Project 2" referred to herein as 3GPP2, and 7-R-45.5 referred to herein as the CDMA 2000 standard, formerly called IS-2000 MC."  
are not currently submitted as part of the IDS

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 (c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 3-8, 10, 12-13, 17-19, 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (hereinafter Zhang), US 2002/0021761.

6. As per claim 1, Zhang teaches a method for providing a multiple layer content, comprising:

dividing an information content into at a plurality of layers (pg 4, [0053], wherein PFGS has a layering scheme, video is encoded into a plurality of layers), a first layer enabling reconstruction of the information content with a first quality ([0053]; [0054], wherein the first quality obtained through the base layer encoding component to encode the video data in the base layer), and a second layer enabling reconstruction of the information content with higher quality when combined with the first layer ([0007], [0010], [0053], [0055] wherein an enhanced QoS is achieved when combined with another layer, the decoder uses “fine granularity” coding means between the layers to improve image quality);

transmitting from an origination terminal the first layer with a first quality of service supported by a network ([0053], [0070], wherein the data are transmitted onto the network according to the bandwidth availability of the network); and

transmitting from the origination terminal the second layer with a second quality of service supported by the network ([0053], [0070], wherein the data are transmitted onto the network according to the bandwidth availability of the network).

6. As per claim 3, Zhang teaches said transmitting from the origination terminal the second layer with a second quality of service supported by the network comprises:

transmitting from the origination terminal the second layer with a quality of service enabling the second layer delivery to a subset of the first set of destination terminals (see for example, [0053-0055]; Fig 4, wherein Zhang discloses client server communications between a content provider and client, wherein the client represent a subset of a plurality of clients).

7. As per claim 4, Zhang teaches a method for providing a multiple layer content, comprising:

receiving at a destination terminal a first layer delivered using a first quality of service supported by a network ([0053], Fig 4, item 406, where the client decoder receives the layers for decoding, first QoS supported by the network is the network bandwidth, see [0070]); and

processing at the destination terminal the first layer and at least one additional layer if the at least one additional layer is delivered using a second quality of service ([0070], [0105-0106], where the decoder decodes different enhanced layers, second QoS supported by the network is supported in [0070], where the QoS fluctuates according to available bandwidth, furthermore, the quality of service can also be pertaining to quality of the video streams base level quality is of different QoS than enhanced layer's qualities).

8. As per claim 5, Zhang teaches said processing at the first destination terminal the first layer and at least one additional layer if the at least one additional layer is delivered using a second quality of service comprises:

combining the first layer information content with the at least one additional layer information content ([0007], [0010], [0053]).

9. As per claim 6, the claim is rejected for the same reasons as rejection to claim 1 above, in

addition, Zhang further teaches a method for providing a multiple layer content, comprising:

receiving at a destination terminal the first layer ([0105-0106], the layers are received at the decoder at the client side); and

processing at the destination terminal the first layer and the second layer if the second layer is received ([0105-0107], start the processing the enhancement layer and check for potential errors).

10. As per claim 7, the claim is rejected for the same reasons as rejection to claim 1 above, in addition, Zhang teaches a method for providing a multiple layer content, comprising:

providing each of the at least two separate layers for transmission ([0053-0055]); and

transmitting at least the first layer over a wireless link ([0051]).

11. As per claim 8, Zhang teaches said providing each of the at least two separate layers for transmission comprises:

assigning each unit of a layer a sequence number ([0073], wherein the resynchronization markers are series of sequence numbers assigned to each layer);

delivering each of the units through a media not guaranteeing in-sequence delivery ([0074], wherein the network is an error prone and speed varying environment, the need for resynchronization means the delivery can be out of sequence and need to be resynchronized); and

re-ordering the delivered units in accordance with the sequence numbers ([0080], [0112], wherein the next logical resynchronization marker pinpoints the location of next packet to be processed, maintaining synchronization with time domain for the media stream while minimizing the amount of data dropped).

12. As per claim 10, Zhang teaches said transmitting at least the first layer over a wireless link comprises:

transmitting the first layer with a first quality of service supported by the wireless link ([0051], [0053-0055]).

13. As per claim 12, Zhang teaches:

transmitting the at least second layer with a second quality of service supported by the wireless link ([0051], [0053-0055]).

14. As per claim 13, the claim is rejected for the same reasons as rejection to claim 3 above.

15. As per claim 17, the claim is rejected for the same reasons as rejection to combination of claims 1, 4, 6, 7 above.

17. As per claim 18, Zhang teaches an apparatus for providing a multiple layer content, comprising:

a memory (Fig 4, item 410); and

a device communicatively coupled to the memory and capable of performing digital signal processing including (Fig 4, item 402):

dividing an information content into at a plurality of layers (pg 4, [0053], wherein PFGS has a layering scheme, video is encoded into a plurality of layers), a first layer enabling reconstruction of the information content with a first quality ([0053]; [0054], wherein the first quality obtained through the base layer encoding component to encode the video data in the base layer), and a second layer enabling reconstruction of the information content with higher quality when combined with the first layer ([0007], [0010], [0053], [0055] wherein an enhanced QoS is achieved when combined with another layer, the decoder uses “fine granularity” coding means between the layers to improve image quality);

coordinating the transmission from an origination terminal the first layer with a first quality of service supported by a network ([0053], [0070], wherein the data are transmitted onto the network according to the bandwidth availability of the network), and

coordinating transmission from the origination terminal the second layer with a second quality of service supported by the network ([0053], [0070], wherein the data are transmitted onto the network

according to the bandwidth availability of the network).

18. As per claim 19, the claim is rejected for the same reasons as rejection to claim 18 above.

19. As per claim 21, the claim is rejected for the same reasons as rejection to claim 3 above.

20. As per claim 22, the claim is rejected for the same reasons as rejection to claim 18 above, in addition, Zhang teaches an apparatus for providing a multiple layer content, comprising:

a second memory (Fig 4, item 432); and

a second device communicatively coupled to the second memory and capable of performing digital signal processing including (Fig 4, item 406):

receiving the first layer at a destination terminal ([0105-0107], wherein the decoder receives the layered media streams); and

processing at the destination terminal the first layer and the second layer if the second layer is received ([0105-0107], processing of the received media streams).

### ***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 2, 11, 15-16, and 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang, in view of Zhang et al. (hereinafter Zhang 578'), US 2002/0054578.

23. As per claim 2, Zhang teaches the method substantially as claimed in claim 1, wherein said transmitting from an origination terminal the first layer with a first quality of service supported by a



network comprises:

transmitting from an origination terminal the first layer with a quality of service enabling the first layer delivery to a first terminal (Zhang, Fig 4, item 406; [0053-0055]).

Zhang does not explicitly teach:

transmission to a set of destination terminals, or broadcasting

However, Zhang 578' teaches transmission to a set of destination terminals (Zhang 578', see for example, [0059]).

It would have been obvious to one of ordinary skill in this art at the time of invention was made to incorporate the teaching of Zhang 578' with Zhang because the combination would improve the efficiency for Zhang's system by being able to reach a plurality of hosts with a one time send signal. Furthermore, Zhang suggested the notion of broadcasting. Referring to (Zhang, pg 5, [0058]), Zhang discloses a set-top box and television as illustrative examples for a client, moreover, it is well known in the art that TV networks possesses the ability to broadcast programs for the advantage of reaching massive audience. Thus, it would have been obvious to have Zhang's system implemented on a broadcasting environment.

24. As per claims 11 and 20, the claims are rejected for the same reasons as rejection to claim 2 above.

25. As per claim 15-16, Zhang – Zhang 578' disclose the invention substantially as rejected in claim 7 above, including:

transmission of layered media streams over broadcast channel, (Zhang 578' see for example, [0059]).

26. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of what was well known in the art.

27. Applicant used the term RTP repugnant to its ordinary meaning. RTP in one embodiment is defined in specification pg 19, [1067] as Radio Transport Protocol, however, Applicant does not further disclose any feature or structure also associated with Radio Transport Protocol anywhere else within the specification. In another embodiment, Applicant' shown in Fig. 4 RTP is associated with multimedia data at the application layer. Real-Time transport protocol (RTP) is an Internet-standard protocol for the transport of real-time data, including audio and video in packet switched networks. Thus, in light of the above, examiner will interpret RTP as Real-Time transport protocol for clarity purposes.

28. As per claim 9, Zhang does not explicitly teach the user of RTP layer.

Official Notice is taken (see MPEP 2144.03) RTP, i.e. Real-time Transport Protocol was well known and routinely used for transport of real-time data, such as audio and video at the time of the invention was made. It would have been obvious to one of ordinary skill in the art to include RTP with Zhang because it would provide for enhanced capabilities for Zhang by providing transport protocol for delivery of real time multimedia data.

29. As per claim 14, Zhang teaches said transmitting at least the first layer over a wireless link comprises:

transmitting at least the first layer over a wireless link [0051]

Zhang does not explicitly teach:

In accordance with load of a transmitting terminal.

Official Notice is taken (see MPEP 2144.03) transmission based upon the load of the transmitter is well known and routinely used for quality controlling purposes at the time of the invention was made. It would have been obvious to one of ordinary skill in the art to include transmission according to load of a transmitting terminal with Zhang because it would provide for enhanced capabilities for Zhang by transmit only when there is enough processing power to handle such load. Further, bandwidth is a direct

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reflection of the workload of the physical network equipments, i.e. when the network equipment, transmitting or receiving is over worked, the result of such an event would lead to reduced bandwidth. Since Zhang teaches transmission of media based upon the bandwidth of the network, it would have been obvious to modify Zhang to incorporate transmitting the layers according to the load of the transmitting terminal.

### *Conclusion*

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "METHOD AND APPARATUS FOR DATA PACKET TRANSPORT IN A WIRELESS COMMUNICATION SYSTEM USING AN INTERNET PROTOCOL".

- i. US 6631122 Arunachalam et al.
- ii. US 2001/0048683 Allan et al.
- iii. US 2001/0038610 Decker et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (571)272-3946. The examiner can normally be reached on M-F 7:15 to 4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAROENCHONWANIT, BUNJOB can be reached on (571)272-3913. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CZ

November 21, 2005



BUNJOB JAROENCHONWANIT  
PRIMARY EXAMINER